

# National Skill Development Program

## CSIR- Integrated Skill Initiative

### FERMENTATION TECHNOLOGY

Dr. S. Bhattacharya,  
CSIR-CSMCRI

Dr. S. Singh,  
NIT Warangal

Dr. A. Srivastava,  
Parul University

Dr. R. Bhambure,  
NCL Pune

Dr. D. Ghosh,  
IIP, Dehradun

Sreenadh Madapati  
Abode biotec India Pvt. Ltd.

Dr. H. H. Salama  
NRC, Cairo, Egypt

K. Ranjith Kumar  
Abode Biotec India Pvt. Ltd.



**CSIR-CSMCRI**  
**CSIR- Central Salt & Marine Chemicals Research Institute**  
**16<sup>th</sup> – 19<sup>th</sup> August, 2022**



## Background

Microbes are important in every part of our life and are widely exploited industrially in agro, food, pharma, chemical, energy, waste treatment, etc. The process for product development may differ but the underlining principles in all the above mentioned processes involves fermentation technology. The skill development programme on fermentation technology aims to introduce the basics of industrial fermentation process involving basic knowledge required for fermentation, parameters to be controlled during fermentation, its industrial application and recent technological advances.

### *Beneficiaries of the course*

Process Engineers; Quality Control Manager; Lab Technicians/Assistants; Shift Engineers; Entrepreneurs in Pharma, biotech and food industries as well as fermentation based industries.

### *Benefits of the course*

The courses will be useful for the graduates aspiring to work in Pharma, biotech and food industries, fermentation industries or for the person who are already employed in the industries to sharpen their skills.

Focus on current needs of fermentation industry.

Course duration: 4 days

## COURSE DETAILS

**TRAINING ON FERMENTATION PRINCIPLES**

**BIOREACTOR DESIGN**

**HANDS ON PILOT SCALE FERMENTATION EXPERIENCES.**

**DOWNSTREAM (PURIFICATION) PROCESS AND  
PRODUCT FORMULATION.**

**MATERIAL AND ENERGY BALANCE COMPUTATIONS AND  
PROCESS ECONOMICS**

## Training Program Fee

₹ 1000/- + ₹ 180/- GST = ₹ 1180/-	Category I : Self- sponsored [Students, Individual (other than student) and Entrepreneur (as an individual)]
₹ 5000/- + ₹ 900/-GST = ₹ 5900/-	Category II : Any sponsored candidate (Government, Industry and sponsored by Entrepreneur)

**DIGITAL PAYMENT ONLY WILL BE ACCEPTED and NO CASH TRANSACTION.**

### Details of Fee Deposit

(Payment through RTGS/ NEFT only)

Amount (₹)	:	
Bank Name	:	
Branch Name	:	
Account No.	:	
Transaction ID and Date	:	
Signature of Depositor/ Candidate Name: _____		

**Kindly submit completed form on/ before 7<sup>th</sup> august 2022,**

**To Dr. Sourish Bhattacharya at email : [sourishb@csmcri.res.in](mailto:sourishb@csmcri.res.in),**

**+91-8017750689**

**NOTE: Candidates with all required information and fees deposited through digital mode only will be accepted and will be selected based on their CV in the said training program.** Please submit a printed copy of fees receipt and a xerox copy of the AADHAR Card during training program, if selected.

**Accommodation for staying at Bhavnagar has to be arranged by Candidates only. The candidate has to produce their double dose completion certificate for introducing COVID-19 protective vaccines during joining to the training program. No accommodation will be provided by the Institute.**

## Bank details of CSIR-CSMCRI for Trainee Program Fee



केन्द्रीय नमक व समुद्री रसायन अनुसंधान संस्थान

गिजुभाई बधेका मार्ग, भावनगर- ३६४ ००२

CSIR-CSMCRI CSIR-CENTRAL SALT & MARINE CHEMICALS RESEARCH INSTITUTE

Gijubhai Badheka Marg, Bhavnagar 364 002, Gujarat, India

Phone No. (O) 0278, 2471792 E-mail: [fao@csmcri.org](mailto:fao@csmcri.org)

### Electronic Fund Transfer Account Details

1	Name of account holder	DIRECTOR, C.S.M.C.R.I.
2	Address	GIJUBHAI BADHEKA MARG, BHAVNAGAR 364002
3	e-mail address	<a href="mailto:fao@csmcri.org">fao@csmcri.org</a>
4	Phone No./Mobile No.	0278-2471792
5	Fax No.	0278-2567562
6	Permanent Account Number (PAN)	AACCC1313P
7	Particulars of Bank Account	
	A. Name of the Bank	STATE BANK OF INDIA
	B. Name of the Branch	WAGHAWADI ROAD BRANCH
	C. Branch Code	10863
	D. Address	Shubham Shop No.G2/3, Plot No.2569 E1/2, Waghawadi Road Opp. Gulista Ground, Bhavnagar-364002 e-mail: <a href="mailto:sbi.10863@sbi.co.in">sbi.10863@sbi.co.in</a>
	E. Telephone No	0278- 2569884
	F. Account No.	30267310153
	G. Type of Account	SAVINGS BANK ACCOUNT
	H. IFSC Code ( RTGS/NEFT)	SBIN0010863
	I. MICR code	364002023



केन्द्रीय नमक व समुद्री रसायन अनुसंधान संस्थान  
(वैज्ञानिक तथा औद्योगिक अनुसंधान परिषद, भारत)  
गिजूभाई बधेका मार्ग, भावनगर 364002 (गुजरात)

CSIR- Central Salt & Marine Chemicals Research Institute  
(Council of Scientific & Industrial Research)  
Gijubhai Badheka Marg, Bhavnagar – 364 002 (Gujarat)  
www.csmcri.res.in



CSIR Integrated Skill Initiative

**“CSIR-Integrated Skill Initiative”**

**Application Form (आवेदन पत्र)**

1.	Name of the Candidate उम्मीदवार का नाम	:		Photo
2.	Father's / Guardian's Name पिता/ पति का नाम	:		
3.	Date of Birth जन्म तिथि	:		
4.	Category वर्ग	:	General / OBC / SC / ST	
5.	Address (Permanent) पता (स्थायी)	:		
6.	Address (Communication) पता (पत्र व्यवहार)	:		
7.	Educational Qualifications शैक्षणिक योग्यता	:		
8.	Phone No. फोन/ मोबाइल नंबर	:		
9.	E mail ईमेल	:		
10.	AADHAAR Card Number आधार कार्ड नंबर	:		
Candidate's Signature उम्मीदवार के हस्ताक्षर				
Details of enclosures				

## Experts:

**Dr. Sourish Bhattacharya** is working as a Scientist at CSIR-CSMCRI, Bhavnagar Gujarat, India. He is having a strong background in the area of microalgal biotechnology, microalgal biofuel, biopolymers and nutraceuticals for therapeutic applications.

**Dr. Debashish Ghosh** is having 17 years of R&D experience in microbial fermentation and bioprocess development. Dr. Ghosh primarily works on bioprocess development from biomass to 2<sup>nd</sup> and 4<sup>th</sup> generation biofuels / oleochemicals / nutraceuticals / biopolymers through ethanologenic and oleaginous yeast mediated fermentation, material resource efficiency, life cycle impact assessment. Presently Dr. Ghosh is heading Biochemistry and Biotechnology Area, Material Resource Efficiency Division, at CSIR-IIP.

**Prof. Heba H. Salama** is working as Associate Professor at National Research Centre Food Industries and Nutrition Research Institute, Dairy Science Dept., Dokki, Cairo, Egypt. She is engaged in research work related to dairy science and technology.

**Sreenadh Madapati** is working as a Director-Business Development at Abode Biotech Pvt. Ltd. and has experience in leading the probiotics based business in India.

K. Ranjith Kumar is working as a Director-Technical at Abode Biotech Pvt. Ltd. and has experience in leading the production of probiotics based business in India.

**Dr. Rahul Bhambure** is currently working as a Senior Scientist at NCL, Pune. His expertise is in the area of process development for protein drugs molecules used for treatment of infectious diseases.

**Dr. Surajbhan Sevda** is working as Assistant professor at Department of Biotechnology, NIT Warangal. His area of expertise is in the area of microbial fermentation.

**Dr. Anupama Shrivastava** is working as Head of the Biotechnology Department at Parul University. Her area of expertise involves microbial synthesis of biopolymers.



### Contact :

**Dr. Sourish Bhattacharya,**  
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